however, set the number of plates measured, and the accordance shown by different zones in the former paper (§ 9, *Monthly Notices*, vol. lxiii. p. 60).

35. But it is clearly better to show at once the nature of the evidence previously collected; and I should here acknowledge that Professor Seeliger has pointed out (*Ast. Nach.* 3865) from independent considerations that there must be a large element of accidental error in the results given in the former paper.

Summary.

36. (*a*) In a previous paper (*Monthly Notices*, vol. lxiii. p. 56) the relative systematic proper motions in R.A. of bright and faint stars in an interval of five years, as found from photographic plates taken at Oxford, were found by an indirect method, using Cambridge meridian observations made twenty years earlier as an intermediary.

(*b*) In the present paper the same method is extended to proper motions in declination.

(*c*) Attributing the proper motions so deduced to the parallactic effect of the Sun's motion in space, and determining thence the relative parallax of bright and faint stars in different octants of the R.A. circuit from the two components, a fair agreement was obtained, which suggested some reality for the determination (see § 15).

(*d*) But on using a different method for testing the results obtained they were not confirmed. This different method depends on one or more assumptions (see § 29), but it is not likely that these assumptions are so incorrect that the former method can still be accepted.

(*e*) It must, therefore, be admitted that either the interval of five years is not sufficiently long, in spite of the number of stars measured, to enable these relative proper motions to be determined, or that the systematic proper motions are so small compared with intrinsic proper motions that we require a much larger number of stars to get trustworthy mean values.

Errata in former paper (*Monthly Notices LXIII., pp.* 61, *&c.*).

Page 61. Last line but two: col. 2 *for* $-0\cdot9$ *read* $-1\cdot3$; col. 7 *for* $-0\cdot1$ *read* $-0\cdot3$; and col. 8 *for* $-0\cdot23$ *read* $-0\cdot33$.

,, 61. Last line: col. 2 *for* $-1\cdot21$ *read* $-1\cdot26$; col. 7 *for* $-0\cdot05$ *read* $-0\cdot08$; and col. 8 *for* $-0\cdot55$ *read* $-0\cdot56$.

,, 62. Table VIII. first line: *for* $-1\cdot21$ *read* $-1\cdot26$; *for* $+0\cdot44$ *read* $+0\cdot39$.

,, 68. Line 13 (18^h-21^h) *for* $-0\cdot2$ *read* $-0\cdot8$; *for* $-0\cdot6$ *read* $-0\cdot8$.

,, 68 Line 20: *for* $-0\cdot6$ *read* $-0\cdot8$.

,, 68. Last line but three: *for* $a-2m$ *read* $a-2m$.

Preliminary Note on a Method of Photographing the Moon with Surrounding Stars. By H. H. Turner, D.Sc., F.R.S., Savilian Professor.

1. If the Moon and surrounding stars can be photographed simultaneously, we can measure the place of the Moon in the same way as that of a planet, comet, or other object, by reference to the surrounding stars; and such observations will be specially valuable near new Moon, when meridian observations are difficult or impossible. It was to obtain observations of the Moon in the first and last quarters that Airy set up the altazimuth at Greenwich in 1847; and unfortunately the instrument did not satisfactorily solve the problem. The present Astronomer Royal has recently set up a larger and steadier instrument with the same end in view, and already something is known of the success which is likely to attend the experiment. But even if early promise is fulfilled, there is ample room for an alternative photographic method.

2. It has for some time been in my mind to adapt for this purpose the method of observation suggested by Captain Hills, R.E., for obtaining terrestrial longitudes. (See *Mem. R.A.S.*, liii. p. 117.) With a fixed camera he takes snapshots of the Moon at times carefully recorded; and *at other times*, when the Moon has passed out of the field (or before it has entered it), a bright star or a planet is photographed on the same plate—several short trails being taken at recorded times. The method is applicable as it stands to the determination of the Moon's place, the disadvantages, however, being:

(*a*) Errors in recording the separate times of exposure enter directly into the inferred R.A. of the Moon.

(*b*) We can only use bright stars or planets, and must thus have rather a large field, or wait long intervals to secure them; perhaps both. The former condition means that the scale of the photograph will in general be small; the second introduces dangers of the camera being moved, or refraction changing considerably in the interval.

3. The second disadvantage can be considerably reduced by the device of a moving plate, moving at the same rate as the stars, and thus allowing faint stars to be impressed by accumulated exposure, which is not possible with trails. The position of the plate can be recorded by photographing on it a fixed point of light, the image of which is cut off automatically by the clock at regular intervals.

4. But a simpler expedient recently occurred to me as follows:—Point an ordinary photographic equatorial to the Moon and its surrounding stars and prepare in the usual way to take a photograph of the region, by an exposure of (say) one minute or of several minutes even, guiding on a star, so that stars of ninth